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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,066	06/22/2006	Kanao Kayamoto	3209-120	8987
6449 7590 10/01/2010 ROTHWELL, FIGG, ERNST & MANBECK, P.C. 1425 K STREET, N.W. SUITE 800 WASHINGTON, DC 20005				
EXAMINER BURNEY, RACHEL L				
ART UNIT		PAPER NUMBER		
1795				
NOTIFICATION DATE		DELIVERY MODE		
10/01/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary

Application No.

10/584,066

Applicant(s)

KAYAMOTO ET AL.

Examiner

Rachel L. Zhang (Burney)

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 7-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, and 9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US Patent 6506531 (Hakata).

Hakata discloses a developer comprising a toner and a carrier (column 2, lines 33-39) wherein the carrier may be a resin coated carrier, which has excellent uniformity (column 4, lines 11-19) which may preferably have an average particle size of 10-50 μm (column 9, line 64 – column 10, line 13). The core may comprise a ferrite particle (column 4, lines 35-53) which has a magnetization of 15-60 Am²/kg. Hakata discloses carrier having a sphericity of 1.1-1.2 (column 13, lines 27-35, column 15, lines 30-31, line 58, column 16, lines 42-43 and lines 66-67). Hakata fails to disclose the surface

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uniformity percent, sphericity standard deviation, or scattered material magnetization of the carrier particle. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § § 2112- 2112.02.

4. Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6506531 (Hakata) as applied to claim 1 above, and further in view of US PGPub 20030177867 (Hultman).

Hakata discloses the carrier as discussed above, but fails to teach the process of forming the carrier in the instant application. Hultman discloses a process of forming an iron powder (PP 0013) with increased magnetic and electrical properties (PP 0015). The iron powder is produced by mixing the powder into a slurry (PP 0021), and then reducing the iron at a temperature between 500 and 600 °C (PP 0024). The particles are then sintered at a temperature between 450 and 1400°C, most preferably 1100-1400 °C (PP 0054). The sintering may be done for 240 minutes (PP 0072). An optional coating may be applied after the particles have been formed (PP 0058). It would have been obvious to one of ordinary skill in the art at the time of the invention to form the particles of Baba with the process of Hultman to form a carrier with improved magnetic and electrical properties.

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5. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6506531 (Hakata) and US PGPub 20030177867 (Hultman) as applied to claim 4 above, and further in view of US PGPub 2005/0214671, Mizutani et al.

Hakata and Hultman disclose the process of producing the carrier particles as discussed above, but fail to teach the sintering in a rotary kiln. Mizutani discloses a process of forming a carrier comprising ferrite core particles which are formed by sintering in a rotary kiln at a temperature from 1100-1500°C in order to produce a spherical core with a smooth surface (PP 0066). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the rotary kiln of Mizutani to form the spherical ferrite cores of Hakata and Hultman to control the sphericity and smooth surface properties. Hakata, Hultman, and Mizutani fail to teach the time of the pre-sintering, retort rotation speed, retort inclination speed, inlet and outlet hammering frequencies. It would have been obvious to one of ordinary skill in the art at the time of the invention to use parameters which give the desired size and surface uniformness as discussed above, which would have reasonably fallen within the desired ranges.

Response to Arguments

6. Applicant's arguments filed 07/16/2010 have been fully considered but they are not persuasive.

Applicant argues that the carrier disclosed by Hakata has a particle size in the range of 0.01-5.0 μ m and only after treatment with the binder resin do the particles have a preferred size of 10-15 μ m. The examiner respectfully disagrees. The magnetite

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particles have a small particle diameter, such as $0.24\mu\text{m}$, before they are formed into the carrier core particles. The final core particle, before the addition of the binder resin layer, is still within the desired range, for example Carrier Core Particles A have a final diameter of $35\mu\text{m}$ before the binder resin is added (column 15, lines 30-37).

Applicant argues that the magnetic powder dispersed carrier of Hakata is different than the spherical ferrite carrier of the instant application, and therefore the materials would not be similar and therefore the properties would not be similar. The examiner respectfully disagrees. The properties, such as surface uniformity percent and sphericity standard deviation, rely on the process of forming the carrier, and not the components of the carrier. Example 1 of the instant specification also teaches that the carriers are not solely ferrite, therefore the core may have additives. Although the carrier cores are not the same, they are similar and made in a similar fashion, and therefore they may have similar properties. When the office cannot show whether or not a compound would have the same properties, then the burden of proof shifts to the applicant. Applicant has failed to show that the desired properties would not be the same.

Applicant argues that neither Hultman nor Hakata teaches or suggest making the granules flow by fluidizing means. The examiner respectfully disagrees. Hultman teaches that the carrier particles are subjected to a fluidized bed (PP 0058).

Applicant states that a translation of the priority document JP-03-424762, and a certification of such translation was presented with the response to the previous Office Action. No such translation has been received.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel L. Zhang (Burney) whose telephone number is (571)272-9802. The examiner can normally be reached on Mon-Fri: 8:30-5:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark F. Huff/
Supervisory Patent Examiner, Art Unit 1795

RLZ